REMARKS

Claims 1, 2, 5-9, 11-13 and 15-32 are pending in this application. By this Amendment, claims 1, 22 and 32 are amended, and claim 25 is canceled. Claim 32 is amended to depend from independent claim 22 in view of the cancelation of claim 25.

No new matter is added to the application by this Amendment. Support for the features added to claims 1 and 22 can be found in canceled claim 25 (for claim 22) and within the present specification, as originally filed, at, for example, page 10, lines 4-19.

Reconsideration of the application is respectfully requested.

I. Rejections Under 35 USC 103

A. Parsons et al. and Azuma in view of Parsons et al.

Claims 1, 2, 5-9, 11-13, 15, 17, 18, 22-29, 31 and 32 were rejected under 35 USC 103(a) as allegedly being unpatentable over JP 09-286958 to Azuma in view of WO 92/01761 to Yang. This rejection is respectfully traversed.

The Patent Office alleges that each and every feature of the foregoing claims would have been obvious to a skilled artisan in view of the teachings of Azuma and Yang. Applicants respectfully disagree with the allegations by the Patent Office as set forth in the Office Action.

Amended claim 1 requires a pressure sensitive adhesive (hereinafter "PSA") having a flame retardant component, consisting of ammonium polyphosphate, that is the sole flame retardant component in the pressure-sensitive adhesive, wherein distribution of the at least one acrylate adhesive, the flame retardant and the at least one tackifying resin components is homogeneous. Amended claim 22 requires that a

flame retardant component, consisting of ammonium polyphosphate, is the sole flame retardant component in the PSA, wherein the flame retardant component and the at least one resin component are compounded into a melt of the at least one acrylate adhesive component, wherein distribution of the at least one acrylate adhesive, the flame retardant and the at least one tackifying resin components is homogeneous.

In contrast to the presently claims, Azuma is directed to a composition where ammonium polyphosphate is not the sole flame retardant component in the composition. Azuma's compositions always require additional acrylic systems which have phosphoric elements incorporated therein. Azuma's additional acrylic system (having phosphoric elements) are clearly flame retardants (see paragraph [0005] of Azuma). However, the presently claimed PSA is directed to an embodiment with ammonium polyphosphate being the sole flame retardant. Thus, Azuma does not teach or suggest the PSA recited in claim 1, regardless of the amount of tackifiers.

Applicants submit that ammonium polyphosphate is a fluid and that it is very difficult to homogeneously mix such high amounts of liquid (i.e. at least 30% and no greater than 60% by weight of the PSA) in such a viscous system, such as, for example, the presently claimed PSA. Azuma adds all his components together (including the ammonium polyphosphate) very early and executes a photopolymerization. In other words, Azuma polymerizes a system having the retardant components already in it. If high amounts of ammonium polyphosphate are used, the copolymerizable component (i.e., Azuma's acrylic system having phosphoric elements) improves any homogeneity of the system (similar chemicals are miscible with each other).

However, for the presently claimed PSA where ammonium polyphosphate is the sole flame retardant, a base polymer (i.e., presently claimed at least one acrylate adhesive component) is first polymerized for the adhesive which is mixable with additives (i.e., presently claimed flame retardant component and at least one resin component) after polymerization is finished. By processing the presently claimed components from a melt, as discussed at page 10, lines 4-19 of the present specification, shear energy from compounding the melt mixes the components homogeneously.

If a skilled artisan started from teachings of a reference which discloses any adhesive processed in the melt, it could not be derived from such teachings that high amounts of fluid together with tackifiers (which are normally granulated solid) could be mixed homogenously into the adhesive, whereby the resulting system remains processible. Moreover, a skilled artisan would not have derived this from the teachings of Azuma, which, in contrast, states that higher amounts of one of his phosphate compounds (the copolymerizable one) would tend to gelling of the system (see [0005] of Azuma) even in solution. However, as a skilled artisan knows, gelling is one of the significant problems of melt processing, so no-one, including a skilled artisan, would expect the Azuma system to be melt-processible.

The presently claimed PSA is novel and non-obvious in view of Azuma's product because the presently claimed ammonium polyphosphate is the sole flame retardant in the resulting PSA. In contrast and as discussed above, Azuma inserts copolymerizable phosphate monomers into his adhesive for better homogeneity. Based on the teachings of Azuma, a skilled artisan would not have expected that a system with such high

amounts of fluid additives could even be homogenized, without incorporation and/or inclusion of Azuma's copolymerizable phosphate monomers.

Thus, Azuma does not teach or suggest a PSA having ammonium polyphosphate as the sole flame retardant component in the PSA, wherein distribution of the at least one acrylate adhesive, the flame retardant and the at least one tackifying resin components is homogeneous. Moreover, Yang fails to remedy the deficiencies of Azuma because Yang also fails to teach or suggest a PSA having ammonium polyphosphate as the sole flame retardant component in the PSA, wherein distribution of the at least one acrylate adhesive, the flame retardant and the at least one tackifying resin components is homogeneous.

In view of the foregoing, Applicants submit that Azuma and Yang, taken singly or in combination, fail to teach or suggest a PSA having a flame retardant component, consisting of ammonium polyphosphate, that is the sole flame retardant component in the PSA, wherein distribution of the at least one acrylate adhesive, the flame retardant and the at least one tackifying resin components is homogeneous as required by amended claim 1. Moreover, Applicants submit that Azuma and Yang, taken singly or in combination, do not teach or suggest a process having a flame retardant component, consisting of ammonium polyphosphate, that is the sole flame retardant component in the PSA, wherein the flame retardant component and the at least one resin component are compounded into a melt of the at least one acrylate adhesive component, wherein distribution of the at least one acrylate adhesive, the flame retardant and the at least one tackifying resin components is homogeneous as required by amended claim 22.

Because these features of independent claims 1 and 22 are not taught or suggested by Azuma and Yang, taken singly or in combination, these references would not have rendered the features of claims 1 and 22 and their dependent claims obvious to one of ordinary skill in the art.

For at least these reasons, claims 1, 2, 5-8, 11-13, 15, 18-29, 31 and 32 are patentable over Azuma and Yang, taken singly or in combination. Thus, withdrawal of this rejection under 35 USC 103(a) is respectfully requested.

B. Azuma in view of Everaerts

Claims 16 and 30 were rejected under 35 USC 103(a) as allegedly being unpatentable over Azuma in view of US Patent No. 5,648,425 to Everaerts. This rejection is respectfully traversed.

Everaerts does not remedy the deficiencies of Azuma as set forth above with respect to independent claims 1, from which claims 16, 17 and 30 depend, because Everaerts also fails to teach or suggest a PSA having ammonium polyphosphate as the sole flame retardant component in the PSA, wherein distribution of the at least one acrylate adhesive, the flame retardant and the at least one tackifying resin components is homogeneous.

Accordingly, Azuma and Everaerts, taken singly or in combination, fail to teach or suggest a PSA having ammonium polyphosphate as the sole flame retardant component in the PSA, wherein distribution of the at least one acrylate adhesive, the flame retardant and the at least one tackifying resin components is homogeneous as required by amended claim 1.

Because the features of independent claim 1 are neither taught nor suggested by Azuma and Everaerts, taken singly or in combination, these references would not have rendered obvious to one of ordinary skill in the art, the features specifically defined in claim 1 and its dependent claims.

For at least these reasons, claims 16 and 30 are patentable over Azuma and Everaerts, taken singly or in combination. Thus, withdrawal of the rejection under 35 USC 103(a) is respectfully requested.

C. Azuma and Yang in view of Parsons

Claims 19-21, 31 and 32 were rejected under 35 USC 103(a) as allegedly being unpatentable over Azuma and Yang in view of US Patent No. 5,851,663 to Parsons. This rejection is respectfully traversed.

Parsons does not remedy the deficiencies of Azuma and Yang as set forth above with respect to independent claims 1, from which claims 19-21, 31 and 32 directly or indirectly depend, because Parsons also fails to teach or suggest a PSA having ammonium polyphosphate as the sole flame retardant component in the PSA, wherein distribution of the at least one acrylate adhesive, the flame retardant and the at least one tackifying resin components is homogeneous.

Accordingly, Azuma, Yang and Parsons, taken singly or in combination, fail to teach or suggest a PSA having ammonium polyphosphate as the sole flame retardant component in the PSA, wherein distribution of the at least one acrylate adhesive, the flame retardant and the at least one tackifying resin components is homogeneous as required by amended claim 1.

Because the features of independent claim 1 are neither taught nor suggested by Azuma, Yang and Parsons, taken singly or in combination, these references would not have rendered obvious to one of ordinary skill in the art, the features specifically defined in claim 1 and its dependent claims.

For at least these reasons, claims 19-21, 31 and 32 are patentable over Azuma, Yang and Parsons, taken singly or in combination. Thus, withdrawal of the rejection under 35 USC 103(a) is respectfully requested.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 2, 5-9, 11-13, 15-24 and 26-32 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Early and favorable action is earnestly solicited.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Applicants respectfully request that this be considered a petition therefor. The Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,

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